

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A data transmitting apparatus for transmitting a plurality of real time streams and a non-real time stream over a common transmission path, comprising:

storing means for storing first packets that compose the real time streams and second packets that compose the non-real time stream; and

transmitting means for transmitting the first packets stored in the storing means at predetermined intervals, transmitting a first packet whose transmission end time is the earliest in the first packets when the transmission times of the first packets overlap, and transmitting the second packets when the transmission intervals of the first packets are longer than the transmission times of the second packets.

wherein the transmitting means is configured to calculate the respective transmission end times of each of the first packets that compose the real time streams based upon respective time intervals and transmission times of each of the first packets, and

wherein the storing means are associated with counting means configured to count the time intervals of each of the first packets prior to respectively issuing requests to transmit each of the first packets to the transmitting means.

2. (Canceled).

3. (Original) The data transmitting apparatus as set forth in claim 1, wherein the transmitting means is configured to treat the transmission times of the second packets multiplied by a positive coefficient that is smaller than 1 as new transmission times of the second packets in case that the second packets are not transmitted while a predetermined number of the first packets are transmitted.

4. (Currently Amended) A data transmitting method for transmitting a plurality of real time streams and a non-real time stream over a common transmission path, comprising the steps of:

storing first packets that compose the real time streams and second packets that compose the non-real time stream; and

transmitting the first packets stored at the storing step at predetermined intervals, transmitting a first packet whose transmission end time is the earliest in the first packets when the transmission times of the first packets overlap, and transmitting the second packets when the transmission intervals of the first packets are longer than the transmission times of the second packets, wherein the respective transmission end times of each of the first packets that compose the real time streams are calculated based upon respective time intervals and transmission times of each of the first packets; and

counting the time intervals of each of the first packets that are stored at the storing step prior to respectively issuing requests to transmit each of the first packets.

5. (Canceled).

6. (Original) The data transmitting method as set forth in claim 4, wherein the transmitting step is performed by treating the transmission times of the second packets multiplied by a positive coefficient that is smaller than 1 as new transmission times of the second packets in case that the second packets are not transmitted while a predetermined number of the first packets are transmitted.

7. (New) A data transmitting apparatus for transmitting a plurality of real time streams and at least one non-real time stream over a common transmission path, comprising:

a plurality of buffers, which respectively store first packets that compose the real time streams and second packets that compose the non-real time stream;

a scheduler, in operative communication with the plurality of buffers, which receives and transmits the first packets stored in the plurality of buffers at predetermined intervals, with a first packet whose transmission end time is the earliest in the first packets being transmitted when the transmission times of the first packets overlap, and the second packets being transmitted when the transmission intervals of the first packets are longer than the transmission times of the second packets, the scheduler being configured to calculate the respective transmission end times of each of the first packets that compose the real time streams based upon respective time intervals and transmission times of each of the first packets; and

counting means, associated with the plurality of buffers, and configured to count the time intervals of each of the first packets, whereupon requests to respectively send each of the first packets to the scheduler for transmission are respectively issued.

8. (New) The data transmitting apparatus as set forth in claim 7, wherein the transmitting means is configured to treat the transmission times of the second packets multiplied by a positive coefficient that is smaller than 1 as new transmission times of the second packets in case that the second packets are not transmitted while a predetermined number of the first packets are transmitted.